

00001

1 IN THE UNITED STATES DISTRICT COURT FOR THE

2 NORTHERN DISTRICT OF OKLAHOMA

3

4

W. A. DREW EDMONDSON, in his)
5 capacity as ATTORNEY GENERAL)
OF THE STATE OF OKLAHOMA and)
6 OKLAHOMA SECRETARY OF THE)
ENVIRONMENT C. MILES TOLBERT,)
7 in his capacity as the)
TRUSTEE FOR NATURAL RESOURCES)
8 FOR THE STATE OF OKLAHOMA,)

9 Plaintiff,)

10 vs.)4:05-CV-00329-TCK-SAJ

11 TYSON FOODS, INC., et al,)

12 Defendants.)

13 -----

14 THE VIDEOTAPED DEPOSITION OF

15 BERTON FISHER, PhD, produced as a witness on

16 behalf of the Defendants in the above styled and

17 numbered cause, taken on the 23rd day of January,

18 2008, in the City of Tulsa, County of Tulsa, State

19 of Oklahoma, before me, Lisa A. Steinmeyer, a

20 Certified Shorthand Reporter, duly certified under

21 and by virtue of the laws of the State of Oklahoma.

22

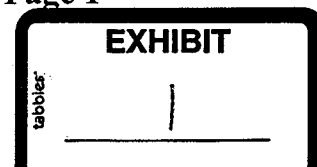
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Fisher, J. Berton Ph.D. 1/23/2008

Page 1



00036

1 Q How much have you been paid for your work on
2 this case, Dr. Fisher?

3 A I didn't come here today with that number in
4 mind. So I don't specifically know how much I
5 personally have been paid. 09:40AM

6 Q Okay. Have you been paid more than \$100,000?

7 A Yes.

8 Q Okay. How long ago were you retained?

9 A I would have been retained in 2004, late '04.

10 Q Okay, and have you been working fairly 09:40AM
11 consistently on this case since late 2004?

12 A Could you define consistently?

13 Q Well, have you devoted at least part of every
14 month since 2004 to your work on this case?

15 A Yes. 09:41AM

16 Q Okay. In a given week, how many hours would
17 you estimate that you spend on this case as opposed
18 to other matters?

19 A That's so variable, I can't tell you offhand.

20 Q You said you've been paid at least a hundred 09:41AM
21 thousand. Have you been paid more than 500,000?

22 A Okay. When you say you, what do you mean by
23 you?

24 Q I'm sorry. Lithochimeia?

25 A I mean when you mean paid, do you mean paid 09:41AM

00325

1 represented in those three exhibits --

2 A No.

3 Q -- in your opinions?

4 A No. As I testified subsequent to that, that

5 the 2007 and 2005 groundwater and spring 06:03PM

6 information, which is included by specific Bates

7 number reference in my production materials, is also

8 considered.

9 Q And when you say groundwater information, does

10 that also include geoprobe information? 06:04PM

11 A Yes.

12 Q Was any geoprobe information provided you

13 today in your deposition?

14 A No. There were no specific analysis from

15 geoprobe in my production, but there was -- there's 06:04PM

16 a table that relates to specific Bates number

17 references that contain some geoprobe information,

18 and that would be what I would rely upon.

19 Q Okay, and are you continuing to evaluate the

20 materials in this case in preparation for your 06:04PM

21 opinions in the preliminary injunction hearing?

22 A Yes, I am. As I just testified to the last

23 gentleman, we'll review all this information that's

24 before me in preparation for testimony and give

25 accurate and complete testimony. 06:04PM

00326

1 MR. PAGE: That's all I have.

2 MR. ELROD: David, for the Record, I say

3 the same thing to you we said earlier and, that is,

4 that we're going to throw a hissy fit if his

5 opinions change one iota from the ones he gave today 06:05PM

6 and if he produces further information that he's

7 relying on in giving his opinion at the PI hearing.

8 MR. PAGE: Well, all I can say, John, is I

9 suspect you'll throw a hissy fit regardless of what

10 happens, but I understand what you're saying. 06:05PM

11 MR. GEORGE: I have one follow-up.

12 REDIRECT EXAMINATION

13 BY MR. GEORGE:

14 Q Dr. Fisher, how many additional groundwater

15 samples beyond those that are in front of you today 06:05PM

16 are you recalling that you may ultimately base your

17 opinion on at the preliminary injunction hearing?

18 A I don't really know at this time. There are

19 probably something like an equivalent number.

20 Q Another 40 or -- 06:05PM

21 A Something like that.

22 Q 40 groundwater samples?

23 A Yeah.

24 Q And spring water samples I think were about 25

25 is what I counted. 06:05PM

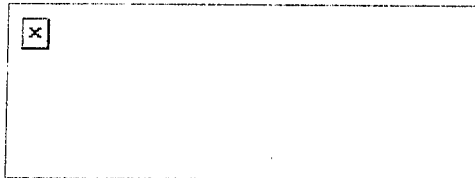
From: Nicole Longwell
Sent: Wednesday, January 16, 2008 4:26 PM
To:

Cc:
Subject: OK v. Tyson, et al. - Additional Engel Document
Attachments: Engel-reference list.pdf

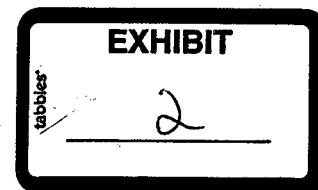
Counselors,

Attached is a reference sheet that Kelly Burch handed to me after the deposition of Bernard Engel yesterday. She informed me that these were websites were he obtained information he relied upon in his opinion.

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1/16/2008

Slaughter weights

<http://usda.mannlib.cornell.edu/usda/ers/89007/table0071.xls>

U of Missouri

<http://extension.missouri.edu/explore/envqual/wq0211.htm>

NLCD 2001

http://www.mrlc.gov/mrlc2k_nlcd.asp

USDA Census

<http://www.agcensus.usda.gov/>

http://www.nass.usda.gov/census/census02/volume1/ok/st40_2_013_013.pdf

http://www.nass.usda.gov/census/census02/volume1/ar/st05_2_013_013.pdf



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January 22, 2008

VIA FEDERAL EXPRESS OVERNIGHT DELIVERY

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Robert E. Sanders, Esq.
Young Williams, P.A.
210 E. Capitol Street, Suite 2000
Jackson, MS 39225

RE: *State of Oklahoma, et. al. v. Tyson, et. al.*
Civil Action Number: 05-CV-0329-GKF-SAJ

Dear Counselors:

Please find enclosed a disk containing additional materials considered by Dr. Roger Olsen, which is marked PI Olsen 28615. Dr. Olsen also has been provided with a copy of two articles previously produced to you as PI Fisher 3922- PI Fisher 3974 and PI Fisher 4951- PI Fisher 5027.

Also enclosed is a list of depositions that have been provided to Dr. Bernard Engel since his deposition. Dr. Engel also has been provided with a copy of PI Fisher 3922- PI Fisher 3974 and PI Fisher 7539- PI Fisher 7542.

EXHIBIT

3

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Attorneys at Law



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January 22, 2008

Page 2

Drs. Harwood and Teaf have been provided with a copy of PI Fisher 4951 - PI Fisher 5027. Enclosed herein is PI Harwood 3021 - PI Harwood 3028, which is an addition to Dr. Harwood's considered materials.

Dr. Gordon Johnson has been provided with a copy of PI Fisher 3922- PI Fisher 3974 and PI Fisher 7539- PI Fisher 7542.

Dr. Robert Lawrence has been provided with a copy of the December 20, 2007 deposition of Dr. James Crutcher.

Please be advised that each of the State's experts for the preliminary injunction has been provided with a copy of Bernard Engel's January 15, 2008 deposition transcript.

Please let me know if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Claire Xidis".

Claire Xidis

CX/mmj

From: Xidis, Claire [cxidis@motleyrice.com]
Sent: Friday, January 25, 2008 3:56 PM
To: George, Robert W.; Bond, Michael R.; jelrod@cwlaw.com; jgraves@bassettlawfirm.com; Sanders; jtucker@rhodesokla.com; Scott McDaniel; Griffin, Jennifer
Cc: David Page; Louis Bullock; Kelly.Burch@oag.ok.gov; Baker, Fred; Ward, Liza; Jaromin, Michelle; David Riggs
Subject: expert materials
Attachments: bacteria draft implementation guidance Nov 2003.pdf

Dear Counsel:

Please be advised:

Dr. Lawrence has been provided with a copy of Dr. Engle's affidavit and the Oklahoma Water Quality Standards for Surface Water and Groundwater, which are publically available at:
http://www.owrb.ok.gov/util/rules/pdf_rul/Chap45.pdf

He also has been provided with the attached EPA document, Implementation Guidance for Ambient Water Quality Criteria for Bacteria (Nov. 2003 Draft), and the following publically available EPA documents:

Implementation Guidance for Ambient Water Quality Criteria for Bacteria (May 2002 Draft) which can be viewed at the below link:

<http://www.epa.gov/waterscience/standards/bacteria/bacteria.pdf>

and EPA Coastal Water and Great Lakes Fact Sheets which can be viewed at the following links:

<http://www.epa.gov/waterscience/beaches/rules/bacteria-risk-level-factsheet.htm>

<http://www.epa.gov/waterscience/beaches/rules/singe-sample-maximum-factsheet.htm>

Dr. Engel has been provided with a copy of PI-Fisher5182 – PI-Fisher5191.

Dr. Harwood has been provided with a copy of PI-Fisher7639 – PI-Fisher7823.

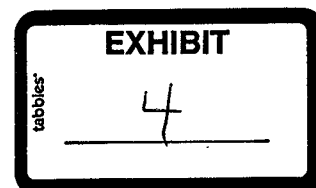
Dr. Johnson has been provided with a copy of PI-Fisher7472 – PI-Fisher7505 and PI-Fisher5182 – PI-Fisher5191.

Dr. Olsen has been provided with a copy of PI-Fisher7639 – PI-Fisher7823.

Dr. Taylor has been provided with a copy of PI-Fisher8086 – PI-Fisher8113 and PI-Fisher5761 – PI-Fisher5780.

Dr. Teaf has been provided with a copy of the December 20, 2007 deposition of Dr. James Crutcher and of PI-Fisher7639 – PI-Fisher7823.

Claire Xidis, Esq.



Motley Rice LLC
28 Bridgeside Boulevard
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From: George, Robert W.
Sent: Saturday, January 19, 2008 4:05 PM
To: 'Xidis, Claire'; jelrod@cwlaw.com; jgraves@bassettlawfirm.com; Sanders; jtucker@rhodesokla.com; Scott McDaniel; Griffin, Jennifer; Bond, Michael R.
Cc: dpage@edbelllaw.com; David Riggs; Baker, Fred; Kelly.Burch@oag.ok.gov; Jaromin, Michelle; Louis Bullock; Ward, Liza
Subject: RE: Dr. Fisher materials

Ms. Xidis,

Mr. Fisher's deposition is scheduled for January 23. Plaintiffs were ordered to produce all materials considered by their experts 21 days in advance of each expert's scheduled deposition. These materials, produced just 5 days prior to Mr. Fisher's deposition, are untimely. Defendants will object to any opinion or testimony by Mr. Fisher which relies upon these materials as well as to any attempt by Plaintiff to introduce these untimely produced materials during the evidentiary hearing on the Motion for Preliminary Injunction.

From: Xidis, Claire [mailto:cxidis@motleyrice.com]
Sent: Friday, January 18, 2008 5:23 PM
To: jelrod@cwlaw.com; George, Robert W.; jgraves@bassettlawfirm.com; Sanders; jtucker@rhodesokla.com; Scott McDaniel; Griffin, Jennifer; Bond, Michael R.
Cc: dpage@edbelllaw.com; David Riggs; Baker, Fred; Kelly.Burch@oag.ok.gov; Jaromin, Michelle; Louis Bullock; Ward, Liza
Subject: Dr. Fisher materials

Counsel,

Please find attached additional materials considered by Dr. Fisher. Attached hereto are PI Fisher 0032819 - PI Fisher 0032883 and a list of additional depositions considered by Dr. Fisher.

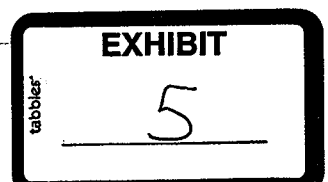
I will be sending a second email shortly with an attachment containing PI Fisher 32884 - PI Fisher 33060. I have divided this into two attachments to avoid creating attachments too large for your email accounts to accept.

If you have any problems opening these attachments, please let me know and we will work with you to figure out a solution.

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From: George, Robert W.
Sent: Saturday, January 19, 2008 4:06 PM
To: 'Xidis, Claire'; jelrod@cwlaw.com; jgraves@bassettlawfirm.com; Sanders; jtucker@rhodesokla.com; Scott McDaniel; Griffin, Jennifer; Bond, Michael R.
Cc: dpage@edbelllaw.com; dpage@riggsabney.com; Louis Bullock; Baker, Fred; Jaromin, Michelle; Ward, Liza; Kelly.Burch@oag.ok.gov
Subject: RE: Dr. Fisher materials, part 2

Ms. Xidis,

Mr. Fisher's deposition is scheduled for January 23. Plaintiffs were ordered to produce all materials considered by their experts 21 days in advance of each expert's scheduled deposition. These materials, produced just 5 days prior to Mr. Fisher's deposition, are untimely. Defendants will object to any opinion or testimony by Mr. Fisher which relies upon these materials as well as to any attempt by Plaintiff to introduce these untimely produced materials during the evidentiary hearing on the Motion for Preliminary Injunction.

From: Xidis, Claire [mailto:cxidis@motleyrice.com]
Sent: Friday, January 18, 2008 5:27 PM
To: jelrod@cwlaw.com; George, Robert W.; jgraves@bassettlawfirm.com; Sanders; jtucker@rhodesokla.com; Scott McDaniel; Griffin, Jennifer; Bond, Michael R.
Cc: dpage@edbelllaw.com; dpage@riggsabney.com; Louis Bullock; Baker, Fred; Jaromin, Michelle; Ward, Liza; Kelly.Burch@oag.ok.gov
Subject: Dr. Fisher materials, part 2

Counsel,

Attached hereto are PI Fisher 32884-33060, as discussed in my previous email.

Claire Xidis, Esq.
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To: George, Robert W.; jelrod@cwlaw.com; Scott McDaniel; jtucker@rhodesokla.com; pthompson@bassettlawfirm.com; rsanders@youngwilliams.com
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Subject: RE: Fisher deposition

Robert,

In response to your question below, information of this type was produced to Defendants as part Dr. Teaf's considered materials on January 9th. The bulk of the information can be found in "Teaf 00006315-6485".

If there is any other analysis of waste production by live stock sources it will be produced in accordance with the Court's scheduling order.

Please call if you have any questions.

Thanks, David.

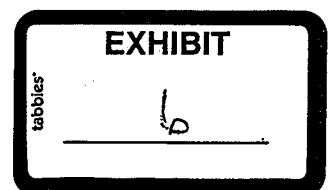
David P. Page
Riggs, Abney, Neal, Turpen, Orbison & Lewis, Inc.
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-----Original Message-----

From: George, Robert W. [mailto:Robert.George@KutakRock.com]
Sent: Wednesday, January 23, 2008 3:30 PM
To: David Page; jelrod@cwlaw.com; smcdaniel@mhla-law.com; jtucker@rhodesokla.com; pthompson@bassettlawfirm.com; rsanders@youngwilliams.com
Subject: Fisher deposition

David,



Dr. Fisher indicted several times in his deposition that another expert has estimated waste production in the IRW by animal species other than poultry (i.e., cattle, swine, humans, horses, wildlife, etc.). Dr. Fisher further testified that he had seen the results of that work. I asked for those estimations and related documents, charts and data be produced. You agreed to produce this information but asked that I make a written request. Please consider this as my request. These materials need to be produced before Olsen's deposition on Friday of this week to avoid further prejudice to defendants.

#####

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January 11, 2008

VIA FEDERAL EXPRESS OVERNIGHT DELIVERY

Jay T. Jorgensen, Esquire
Sidley Austin LLP
1501 K Street NW
Washington, D.C. 20005

RE: *State of Oklahoma, et. al. v. Tyson, et. al – Harwood Production.*
Civil Action Number: 05-CV-0329-GKF-SAJ

Dear Jay:

In follow up to my January 10, 2008, email, enclosed please find a disk entitled "*State of Oklahoma v. Tyson, et. al., re: Jorgensen 01/09/08 Email.*" This disk contains the following items:

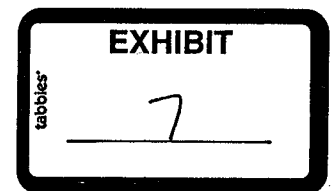
- **PI-Harwood00002713-00002747.** The PI-Harwood00002713-00002747 bates range was intended to bates stamp part of the chart contained in the immediate preceding document, PI-Harwood00002360-00002712. Due to a technical error in the conversion process, the document did not format and bates stamp properly. Therefore, I am providing a copy of this item in its native format.
- **PI-Harwood00002851, PI-Harwood00002199-00002202, PI-Harwood00000174-00000185, PI-Harwood00000203-00000526, PI-Harwood00000613-00000616, and PI-Harwood00001752-00001928.** Due to conversion errors, these documents are being reproduced in their native file formats which will eliminate any difficulties in viewing columns or other contents.
- **PI-Harwood00002954-PI-Harwood00002960.** This document was inadvertently left off of the original production

If you have any questions, please let me know.

Sincerely,


Claire Xidis

CX/mmj



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Attorneys at Law



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Development of Chicken Farm Biomarker(s): Process Overview to Date
9-05-06

1. DNA extraction from original samples

- From 2 chicken litter samples (5 replicates each) and 2 agricultural soil samples (5 replicates each) to which the chicken litter was applied genomic DNA was extracted with Bio101 DNA extraction kits (QBiogene Products).

2. T-RFLP of extracted genomic DNA from original samples

Methods

- The extracted DNA was PCR amplified with FAM labeled universal bacterial primers 8F-907R, with *E.coli* genus specific primers [Tsen, et al. 1998], and *Bacteroides* genus specific primers [Bernhard and Field, 2000].
- These PCR products were digested with *Acil*, *HhaI*, *MspI*, and *HaeIII*.
- Common terminal restriction fragments for each PCR primer pair (e.g. universal, *E.coli* or *Bacteroides*), among all 20 subsamples were targeted as potential biomarkers of chicken litter.
- Two separate sets of *Enterococcus* genus specific PCR primers from the literature have been tested and have not worked against an *Enterococcus faecialis* positive control and the original DNA extracted from the soil and liter samples.

Results

- Only the universal and *E. coli* were carried forward at this stage as no common fragments among the *Bacteroides* were identified.

Table 1. Results of common T-RFs found in replicate soil and litter samples.

E.Coli MSP

T-RF	Litter A	Litter B	Soil A	Soil B
496.0	1,2,4,5	1,2,3,5	1,2,4	all
498.9	all	all	1,2,4,5	all
500.8	all	all	all	all

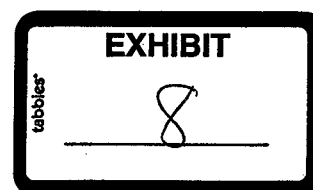
Universal MSP

T-RF	Litter A	Litter B	Soil A	Soil B
80.1	<u>1,2,3,4</u>	all 5	none	1,3,4
130.9	1,3,4	all 5	3	none
142.9	all	1,2,3,4	1,4	1
147.3	all	all 5	all	1,4
158.9	<u>2,3,4</u>	all 5	2,3,4,5	1,4
165	1,3,4	all 5	1,3,4,5	1,4

- Number indicates the litter or soil replicate sample that the T-RF was identified in, and an underlined number indicates that the T-RF represented <1% of community in that replicate.

3. Clone libraries to identify/sequence the organisms with T-RFs of interest

Methods



- Clone libraries were constructed from the original genomic DNA extracted from the soils and litters, amplified with either universal bacterial or the *E. coli* genus specific primers. Four universal clone libraries were constructed from the following pooled DNA samples (i.e. 1 ul of genomic DNA from each sample was added to the PCR reaction for inclusion into the clones), LA1 and LA4, LB3 and LB4, SA4 and SA1, and SB1 alone. Four *E. coli* clone libraries were constructed from the following samples, SA1, LB4, LA4, and SB1.
- The plasmids were excised from the clones and analyzed by T-RFLP (digested with *MspI* alone) to determine which clones contained the T-RFs of interest.
- Plasmids containing the T-RFs of interested were amplified by PCR and sequenced using the primers T7, T3, 519R, and 338F for double coverage of the 16s rDNA.

Results

- Only 3 of the 6 potential T-RFs representing biomarkers were found in the universal clone library (i.e. T-RFs 142.9, 147.3 and 158.9). All 3 *E. coli* biomarkers were found in the *E. coli* clone library.

4. Biomarker sequence analysis and PCR primer design

Methods

- The three universal and the three *E. coli* sequences were compared to the BLAST database to determine their nearest neighbors and potential sites for design of PCR primers.
- PCR primers were designed for the three biomarkers from the universal library, targeting regions of variability between our sequence and the database sequences of the top 20 matches in the BLAST database.
- These primers were analyzed for thermodynamic folding problems and compared to the RDPII database to determine what other organisms they might amplify. The results of the analysis of the forward and reverse PCR primer comparison against the RDPII database are presented in the table below.

Results

- Only 1 *E. coli* biomarker had a conserved variable region among the top 20 matches in the BLAST database. PCR primers were designed for this variable region and another region that had a mismatch between our sequence and the database sequence of 10 of the top 20 matching sequences.

Table 2. Primer design for potential biomarkers identified during T-RFLP/clone library assessment.

Potential Biomarker: Clone/ T-RF/Organism	Forward Primer Accession number of closest match in sequence database RPDII	Reverse Primer Accession number of closest match in sequence database RPDII
Clone SA19/ T-RF 158.9/ Kineococcus	AY919955, AY426452, AF195447, AF513961, AY862810, AM085954, AM182287, AM182297, AM182298, AM182299	0 organisms
Clone SB37/ T-RF 142.9/ Uncultured organisms	0 organisms	0 organisms
Clone LA35/ T-RF 147.3/ Brevibacterium	0 organisms	0 organisms
Clone SA15/ T-RF 500.8/ Pantoea ananatis	0 organisms	AJ010486, DQ221344, AF364845, AF364844, AY528223, AY579209, AY579211, U80196, U80209, AB004758, AB027693, AY530796, AJ629190, AB178169, AB178170, AY898643, AB114622, DQ133548, DQ195524, AB242937, AB242945, AB242946, AB242979 30 sequences in Enterobacter

5. PCR primer specificity testing

Methods

- The PCR primers were tested against the original soil and litter sample DNA extracts to determine if they amplified these organisms in these matrices (a nested pcr approach with the universal primers 8F-907R or *E. coli* genus specific primers were used then the strain specific primers). The preliminary results are presented below.
- The PCR primers are now being tested against other fecal samples from inside and outside the impacted watershed.
- The primers are also being tested against the closet related organisms to the strains as identified in the BLAST analysis. These organisms or PCR products were obtained from the researchers themselves who uploaded the sequences (for 2 of the biomarkers) or from the German culture collection, DSMZ.

Results

- PCR primers were developed for the four potential biomarkers identified using universal and *E. Coli* T-RFLP and clone library analysis. Table 3 illustrates results of running the biomarker-specific PCR primers on the original litter and soil samples.

Table 2. Preliminary results of biomarker-specific PCR analysis of original litter and soil replicates

Biomarker	Clone LA35 Genus-Brevibacterium		Clone SB37 Unknown genus		Clone SA19 Kineococcus		Clone SA15 E. coli	
	% of T-RF	Amplified with LA35 primer?	% of T-RF	Amplified with SB37 primer?	% of T-RF	Amplified with SA19 primer?	% of T-RF	Amplified with SA15 primer?
Sample	profile		profile		profile		profile	
Litter Sample Results								
LA1	2.6	yes	2.8	yes	No data ^{&}	not run	26.4	yes
LA2	2.6	yes	4.6	no [#]	0.8	yes	13	no [#]
LA3	3.4	yes	5.4	yes	1	not run ^{\$}	No data ^{&}	yes
LA4	3.3	yes	5.9	yes	1.3	not run ^{\$}	23.3	no [#]
LA5	No data ^{&}	yes	No data ^{&}	not run ^{\$}	No data ^{&}	not run ^{\$}	28.5	yes
LB1	3.3	yes	3.6	not run ^{\$}	1.5	not run ^{\$}	33	yes
LB2	4	yes	5.5	yes	1.1	no [#]	43.8	yes
LB3	3.5	yes	6.8	yes	1.3	yes	16.5	yes
LB4	3.2	yes	5.7	not run ^{\$}	1.2	not run ^{\$}	29.1	no [#]
LB5	4.5	not run ^{\$}	8	not run ^{\$}	1.1	not run ^{\$}	48.5	no [#]
Soil Sample Results								
SA1	7.1	yes	0.8	yes	2.3	not run	6.7	yes
SA2	12.7	no [#]	Not present*	yes	3.4	not run ^{\$}	14.3	no [#]
SA3	9	yes	1	yes	3.6	not run ^{\$}	25.3	yes
SA4	6.9	yes	0.8	yes	3.2	yes	10.4	yes
SA5	9.5	no [#]	0.9	yes	3.6	not run ^{\$}	2.5	yes
SB1	6	yes	0.8	yes	3	yes	18.1	yes
SB2	No data ^{&}	yes	No data ^{&}	yes	No data ^{&}	yes	6.8	yes
SB3	Not present*	yes	Not present*	yes	3	no [#]	9.1	yes
SB4	6.3	yes	0.8	yes	3.5	no [#]	2.6	yes
SB5	No data ^{&}	yes	No data ^{&}	yes	No data ^{&}	yes	7.1	yes

Samples that had a negative result in the PCR with strain specific primers of the original soil and litter samples will be analyzed again to confirm results.

* **Not present** indicates that the organism represented by that T-RF was not found in the original analysis performed in Step 2 above.

& **No data** indicates that the T-RFLP analysis was not completed on this sample.

\$ **Not run** indicates that this sample has not been PCR amplified and run on a gel yet.

Tsen, H.YES., C.K. Lin, and W.R. Chi, *Development and use of 16S rRNA gene targeted PCR primers for the identification of Escherichia coli cells in water*. Journal of Applied Microbiology, 1998. **85**(3): p. 554-560.

Bernhard, A.E. and K.G. Field, *Identification of nonpoint sources of fecal pollution in coastal waters byes using host-specific 16S ribosomal DNA genetic markers from fecal anaerobes*. Applied and Environmental Microbiology, 2000. **66**(4): p. 1587-1594.

6.0 Results PCR for Potential Biomarkers on 57 Fecal Samples

Sample Location	No. of samples	In/Out IRW	Type	City	Amplified with species specific primers				
					Sample ID	LA35	SB37	SA19	SA15
MAN-BC-1	2 - a,b	Out	Beef		BC 1a	-	-	-	-
					BC 1b	-	-	-	-
MAN-BC-2	2 - a,b	Out	Beef		BC 2a	-	+	-	-
					BC 2b	-	+	-	-
MAN-BC-3	2 - a,b	Out	Beef		BC 3a	-	-	-	-
					BC 3b	-	-	-	-
MAN-BC-4	2 - a,b	Out	Beef		BC 4a	-	-	-	-
					BC 4b	-	-	-	-
MAN-BC-5	2 - a,b	Out	Beef		BC 5a	-	+	+	-
					BC 5b	-	-	-	-
MAN-BC-6	2 - a,b	In	Beef		BC 6a	-	+W	-	-
					BC 6b	-	-	-	-
MAN-BC-7	2 - a,b	In	Beef		BC 7a	-	+	+W	+
					BC 7b	+	+	+	+
MAN-BC-8	2 - a,b	In	Beef		BC 8a	-	-	-	-
					BC 8b	-	-	+W	-
MAN-BC-9	2 - a,b	In	Beef		BC 9a	-	-	-	-
					BC 9b	-	-	+W	-
MAN-BC-10	2 - a,b	In	Beef		BC 10a	-	+W	+W	-
					BC 10b	-	+	+	-
MAN-BC-F	1 (blank)	Out	Beef		BC F	-	+	-	-
MAN-DC-1	1	Out	Dairy		DC 1	-	+	+W	+
MAN-DC-2	2 - a,b	Out	Dairy		DC 2a	-	-	-	-
					DC 2b	-	-	-	-
MAN-DC-3	2 - a,b	In	Dairy		DC 3a	-	+	-	-
					DC 3b	-	+	-	-
MAN-DC-F	1 (blank)	Out	Dairy		DC F	-	-	-	-
MAN-SW-1	2 - a,b	Out	Swine		SW 1a	-	+	+	-
					SW 1b	-	+	-	-
MAN-SW-2	1	In	Swine		SW 2	-	-	-	-
MAN-DK-1	2 - a,b	Out	Duck		DK 1a	+	+	+	+
					DK 1b	+	+	+	+
MAN-DK-2	2 - a,b	Out	Duck		DK 2a	-	+	+	+
					DK 2b	-	+	+	+
MAN-DK-3	2 - a,b	In	Duck		DK 3a	-	+	+	+
					DK 3b	-	-	+	+
MAN-DK-4	2 - a,b	In	Duck		DK 4a	-	-	-	-
					DK 4b	-	-	-	-
MAN-DK-5	2 - a,b	In	Duck		DK 5a	-	+	-	-
					DK 5b	-	-	-	+
MAN-DK-F	1 (blank)	In	Duck		DK F	-	-	-	-
MAN-GS-1	2 - a,b	Out	Geese		GS 1a	+W	+	+	+
					GS 1b	-	+	+W	-
MAN-GS-2	2 - a,b	Out	Geese		GS 2a	-	+	-	-
					GS 2b	-	-	-	-
MAN-GS-3	2 - a,b	In	Geese		GS 3a	-	-	-	-
					GS 3b	-	+	+	+
MAN-GS-4	2 - a,b	In	Geese		GS 4a	-	+	-	-
					GS 4b	-	+	-	-
MAN-GS-5	2 - a,b	Out	Geese		GS 5a	-	+	+	+
					GS 5b	-	+	+	+
MAN-HM-1	1	Out	WWTP	Claremore	HM 1	-	+	+	+
MAN-HM-2	1	In	WWTP	Siloam Springs	HM 2	-	+	+	+
MAN-HM-3	1	In	WWTP	Fayetteville	HM 3	-	+	-	-
MAN-HM-4	1	Out	Septic	Tulsa	HM 4	-	+	+	-
MAN-HM-5	1	In	Septic	Fayetteville	HM 5	-	+	-	-
MAN-HM-6	1	In	Septic	Siloam Springs	HM 6	-	-	-	-
control					++	+	+	+	+
control					--	-	-	-	-
control					-	-	not run	-	not run
control					+	+	+	+	+

Re-Extract and Run (+) Results Using LA35 Biomarker

Sample	Type	Amplified w/ LA35 primers ?	Annealing temp	Date Analyzed
Bc7b (original extraction)	Fecal	-	60	8/31/2006
Dk1a (original extraction)	Fecal	-	60	8/31/2006
Dk1b (original extraction)	Fecal	+	60	8/31/2006
Gs1a (original extraction)	Fecal	+	60	8/31/2006
Bc 7a (new extraction)	Fecal	-	60	8/31/2006
Bc 7b (new extraction)	Fecal	-	60	8/31/2006
Dk 1a (new extraction)	Fecal	-	60	8/31/2006
Dk 1b (new extraction)	Fecal	+	60	8/31/2006
Gs 1a (new extraction)	Fecal	+	60	8/31/2006

Sample	Type	Amplified w/ LA35 primers ?	Annealing temp	Date Analyzed
Additional Soil Samples from Litter-Applied Fields				
LAL5-A-2-6-13-06	Soil	-	60	8/31/2006
LAL5-C-2-6-12-06	Soil	+	60	8/31/2006
LAL-7-A-2-6-20-06	Soil	+	60	8/31/2006
LAL-7-B-2-6-20-06	Soil	+W	60	8/31/2006
LAL-7-C-2-6-19-06	Soil	+W	60	8/31/2006
LAL10-B-2-6-26-06	Soil	-	60	8/31/2006
LAL10-A-2-6-26-06	Soil	-	60	8/31/2006
LAL10-A-4-6-26-06	Soil	-	60	8/31/2006
LAL8-A-2-6-19-06	Soil	+	60	8/31/2006
LAL8-B-2-6-21-06	Soil	-	60	8/31/2006
LAL9-D-2-6-22-06	Soil	-	60	8/31/2006
LAL9-B-2-6-22-06	Soil	+	60	8/31/2006
LAL9-A-2-6-22-06	Soil	+	60	8/31/2006
LAL7-D-2-6-29-06	Soil	+	60	8/31/2006
LAL8-D-2-6-20-06	Soil	+	60	8/31/2006
LAL11-C-2-6-28-06	Soil	-	60	8/31/2006
LAL11-D-2-6-28-06	Soil	-	60	8/31/2006
LAL11-A-2-6-29-06	Soil	+	60	8/31/2006
LAL11-D-2-Q-6-28-06	Soil	+	60	8/31/2006
LAL12-A-2-7-6-06	Soil	-	60	8/31/2006
LAL12-A-2-Q-7-6-06	Soil	+	60	8/31/2006
LAL12-C-2-7-7-06	Soil	-	60	8/31/2006
LAL12-D-2-7-7-06	Soil	-	60	8/31/2006
LAL 13-A-2-7-6-06	Soil	+	60	8/31/2006
LAL 13-C-2-7-7-06	Soil	-	60	8/31/2006
LAL 13-C-2-Q-7-7-06	Soil	+	60	8/31/2006
LAL 13-D-2-7-6-06	Soil	-	60	8/31/2006
Positive Results		14		
Total Samples		26		
Additional Litter Samples				
FAC1-6-20-06	Litter	+	60	8/31/2006
FAC2-6-21-06	Litter	+	60	8/31/2006
FAC-03-7-6-06	Litter	+	60	8/31/2006
FAC-4	Litter	+	60	8/31/2006
FAC-5	Litter	+	60	8/31/2006
FAC-6	Litter	-	60	8/31/2006
Positive Results		5		
Total Samples		6		
Field Runoff Samples				
EOF-1-6-17-06	Water	-	60	8/31/2006
EOF-Q2-6-17-06	Water	-	60	8/31/2006
EOF-Q1-6-17-06	Water	+	60	8/31/2006
EOF-SPREAD073B-6-18-06	Water	+	60	8/31/2006
EOF-SPREAD023-6-18-06	Water	+	60	8/31/2006
EOF-SPREAD044-6-18-06	Water	-	60	8/31/2006
EOF-SPREAD025-6-18-06	Water	Not Analyzed	60	8/31/2006
EOF-SPREAD068-6-18-06	Water	+	60	8/31/2006
Positive Results		4		
Total Samples		7		

7. Recommendations

- **Sequence amplification products from (+) duck and goose sample to determine similarity with LA35 target**
- **Sequence all fecal samples that came up (+) for LA35 to determine variability of all amplicons**
- **Use sequences to develop QPCR primers**
 - i. Optimize QPCR to achieve greater specificity**
 - ii. Optimize QPCR to achieve lowest detect limit**
 - iii. Optimize QPCR to assess specificity of reactions**

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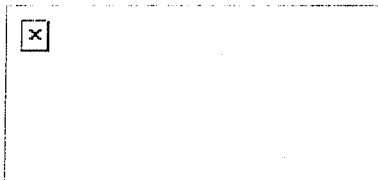
Page 1 of 2

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To:
Cc: Philip Hixon; Nicole Longwell
Subject: FW: Materials Considered by Dr. Teaf
Attachments: PI-Teaf00006487-00006488.pdf; PI-Teaf00006489-00006494.pdf

A. Scott McDaniel

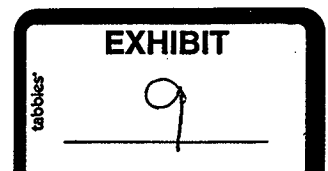
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Subject: Materials Considered by Dr. Teaf



1/21/2008

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Page 2 of 2

Dr. Teaf has recently been provided with the attached documents, which are Bates numbered PI-Teaf00006487-6494. If anyone has difficulty opening the attached files, please let me know. Thank you.

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1/21/2008

00001

1 IN THE UNITED STATES DISTRICT COURT FOR THE
2 NORTHERN DISTRICT OF OKLAHOMA

3

4

W. A. DREW EDMONDSON, in his)
5 capacity as ATTORNEY GENERAL)
OF THE STATE OF OKLAHOMA and)
6 OKLAHOMA SECRETARY OF THE)
ENVIRONMENT C. MILES TOLBERT,))
7 in his capacity as the)
TRUSTEE FOR NATURAL RESOURCES)
8 FOR THE STATE OF OKLAHOMA,)

9 Plaintiff,)

10 vs.)4:05-CV-00329-TCK-SAJ

11 TYSON FOODS, INC., et al,)

12 Defendants.)

13 -----

14 THE VIDEOTAPED DEPOSITION OF
15 BERNARD ENGEL, PhD, produced as a witness on
16 behalf of the Defendants in the above styled and
17 numbered cause, taken on the 15th day of January,
18 2008, in the City of Tulsa, County of Tulsa, State
19 of Oklahoma, before me, Lisa A. Steinmeyer, a
20 Certified Shorthand Reporter, duly certified under
21 and by virtue of the laws of the State of Oklahoma.

22

23

24

25

Engel, PhD, Bernard 1/15/2008

Page 1



00284

1 identify some of the -- some of the other watersheds
2 from which it came from. Again, a limitation in the
3 data is that given that it's only specific to the
4 section, township, range and that's a one-by-one
5 mile square, many times watershed boundaries are 05:53PM
6 going to cut through that, and so in that case, it's
7 going to be unclear as to whether it was in the
8 watershed, for example, to the left side of that one
9 mile square, to the right side of that, and there
10 may even be a third watershed that intersects that. 05:53PM
11 So there's a group of locations for which waste is
12 generated and disposed. They're going to fall in
13 these watershed borders.

14 Q And those -- but according to what -- if I
15 recall your testimony accurately, those were 05:54PM
16 excluded from your numbers contained in your
17 affidavit; is that correct?

18 A That is correct.

19 MS. LONGWELL: I have no further questions
20 for you. Does anyone else? 05:54PM

21 MR. PAGE: I have just one question.

22 CROSS EXAMINATION

23 BY MR. PAGE:

24 Q Dr. Engel, are you continuing your analysis of
25 information and data -- 05:54PM

00285

1 A Yes.

2 Q Let me just finish my question. That

3 underlies the analysis and opinions that you

4 provided in your affidavit in this case and you've

5 discussed in your deposition today? 05:54PM

6 A Yes.

7 MR. PAGE: No further questions.

8 MS. LONGWELL: I have a follow-up question

9 then.

10 REDIRECT EXAMINATION

11 BY MS. LONGWELL:

12 Q Then let me follow up on Mr. Page's question

13 and, that is, then if you are continuing your

14 analysis, are the numbers within your affidavit

15 going to change at the time of your testimony at the 05:54PM

16 preliminary injunctive hearing?

17 A It would have the potential to change. You

18 know, there has been additional data that continues

19 to flow in, and one example of that recent data is I

20 have in the last week or maybe two weeks seen an 05:55PM

21 estimate of the poultry production in the Illinois

22 River watershed that the defendants have provided.

23 I've not had an opportunity to work with that to see

24 if that provides additional insight.

25 Q And what other data? You said additional 05:55PM

00286

1 data. What other data have you seen besides this
2 estimated poultry production that the defendants
3 have provided?

4 A That would be the primary piece of data that

5 I've seen most recently. If there are additional 05:55PM

6 records that the defendants have provided that may
7 provide further insight as to the integrator

8 associated with the 130 or so active houses that

9 we've not been able to identify an integrator to

10 date, you know, there may be more of those that get 05:56PM

11 identified because in all likelihood, those 130

12 belong to the integrators, but we just have -- we

13 couldn't identify them specifically as of the time

14 of the materials that were put together here. So,

15 you know, as new data comes in and those can be 05:56PM

16 identified with an integrator, you know, the numbers

17 may change a bit.

18 Q Well, are you -- after this deposition are you

19 going to ask your counsel that you're working with

20 for the State to provide any additional information 05:56PM

21 that has been discussed here with you by the

22 defendants' counsel?

23 A Certainly, and I believe that I've seen the

24 majority of the data that was relevant to this

25 analysis to date. So to the extent that there may 05:57PM

00287

1 be additional data that counsel has, we'll certainly

2 be asking for that.

3 Q I guess I'm asking you if there's anything

4 specifically that was discussed here, such as the

5 numbers that Mr. Graves talked about or the Arkansas 05:57PM

6 data that Mr. George talked about, that you would be

7 specifically asking for from counsel for the State?

8 A So Mr. George's request was -- can you remind

9 me --

10 Q He discussed about the data within Arkansas 05:57PM

11 and whether certain data existed and your knowledge

12 of whether certain knowledge existed. Are you going

13 to follow up with regards to that data with your

14 counsel?

15 A I'll certainly follow up, but again my 05:58PM

16 understanding is that the data with the level of

17 specificity required to do this analysis isn't

18 available in Arkansas.

19 Q And that's based on other people's evaluation

20 of the data, correct, not your own? 05:58PM

21 A That would be correct.

22 MS. LONGWELL: I don't have any further

23 questions.

24 MR. ELROD: David, I just -- I'm shocked.

25 If he adds one word to his opinion, I'm going to 05:58PM

00288

1 throw an absolute screaming fit. I mean it's got to
2 come to an end at some point in time, and we're
3 entitled to know that it's over with and we can rely
4 on what he said today and only -- that's the only
5 thing you guys are going to throw at us at the PI 05:58PM
6 hearing.

7 MR. PAGE: Well, this is a preliminary
8 injunction hearing.

9 MR. ELROD: I know but --

10 MR. PAGE: One example that Dr. Fisher -- 05:58PM
11 excuse me, Dr. Engel just mentioned as to we just
12 got the information on your bird numbers recently,
13 in the last ten days.

14 MR. SANDERS: I have a follow-up question
15 based on, David, your -- 05:58PM

16 MR. PAGE: And I think, you know,
17 reasonably that would be something I'd want to
18 provide to my experts on waste generation.

19 MR. GRAVES: You all had the bird
20 information before that. You just didn't have it 05:59PM
21 totaled by us. That's all the order required.

22 MS. BURCH: That isn't true.

23 MR. GRAVES: It is true.

24 MS. BURCH: It isn't.

25 MR. GRAVES: It absolutely is.

00289

1 MR. PAGE: Well, let's not argue about --

2 MR. GRAVES: We used the same documents we
3 already produced.

4 MR. PAGE: You all know that the court
5 ordered a summary and analysis, and it's that 05:59PM
6 analysis that in particular I plan to provide Dr.
7 Engel.

8 DIRECT EXAMINATION

9 BY MR. SANDERS:

10 Q Doctor, my name is Bob Sanders. I represent 05:59PM
11 the Cal-Maine defendants and I've just got one
12 question. Based on your answer to Mr. Page's
13 question, are the defendants to assume that these
14 are not necessarily your final numbers and the
15 opinion in your affidavits aren't necessarily your 05:59PM
16 final opinions?

17 A So, you know, as this new data becomes --

18 Q Just give me a yes or no and then explain.

19 A Okay.

20 MR. GARREN: Object to the form. 05:59PM

21 MR. GRAVES: Who is doing the objections
22 here?

23 MR. GARREN: I did on that one.

24 MS. BURCH: The State.

25 Q Can I assume that your opinions expressed in 06:00PM

00290

1 the affidavit are final, yes or no, and then you can
2 explain?

3 A The opinions -- no, the opinions may not be
4 final.

5 Q All right. Then can I assume that the numbers 06:00PM
6 that you've given in your affidavit are final, yes
7 or no?

8 A No. The numbers have the potential to change
9 based on newly available data.

10 Q So we can't rely on this affidavit that we've 06:00PM
11 been examining you on all afternoon; is that
12 correct?

13 MR. PAGE: Object to the form.

14 A The numbers in the affidavit may change
15 slightly. 06:00PM

16 Q And the opinions; isn't that what you just
17 said?

18 A I think it's more --

19 Q I'll represent to you that's what you just
20 said. So isn't it correct what you are saying is -- 06:00PM

21 MR. PAGE: Excuse me. You've asked several
22 questions, and you're not allowing him to answer
23 one. So please ask your question and pause long
24 enough --

25 MR. SANDERS: Let me withdraw it. 06:01PM

00291

1 MR. PAGES: -- so the witness may answer.

2 MR. SANDERS: I'll withdraw the question

3 that's on the table.

4 Q Is it correct that I can't rely on the

5 opinions or the numbers that you have set forth in 06:01PM

6 your affidavit that you've been questioned about

7 this afternoon?

8 MR. PAGE: Object to the form.

9 A The numbers have the potential to change based

10 on the newly available data. 06:01PM

11 Q And the opinions also; isn't that what you

12 just said?

13 A I would think it's more the numbers as opposed

14 to -- well, inasmuch as the opinions include

15 numbers, then given that the numbers may change, the 06:01PM

16 opinions may change.

17 MR. SANDERS: I'll join in Mr. Elrod's

18 objection. David, you all should have told us this

19 at 9:00 this morning, and I'm just flabbergasted

20 that we're here, you know, until almost 6:00 in the 06:01PM

21 evening.

22 MS. LONGWELL: And Peterson joins in the

23 objection as well.

24 MS. SOUTHERLAND: As does Cargill.

25 MS. LONGWELL: We reserve the right to 06:01PM

00292

1 reconvene on the State's production, which I would
2 assume they have a responsibility to, and any
3 updates to Mr. Engel's opinions prior to February
4 19th and beginning the preliminary injunctive
5 hearing. 06:02PM

6 MS. GRIFFIN: Willow Brook would like to
7 join in the objection as well.

8 MR. GRAVES: George's does as well, and
9 we'll probably go ahead and issue a notice for a
10 follow-up deposition, and we can cancel it if no new 06:02PM
11 numbers or opinions come out, but I intend to go
12 ahead and get moving with scheduling another
13 deposition to follow up.

14 MR. SANDERS: We have no choice.

15 MR. ELROD: Down, over? 06:02PM

16 MR. PAGE: I'm finished.

17 VIDEOGRAPHER: This concludes the
18 deposition of Dr. Bernard Engel. We are now off the
19 Record. The time is 6:02 p.m.

20 (Whereupon, the deposition was 06:02PM
21 concluded at 6:02 p.m.)

22

23

24

25

From: David Page [dpage@riggsabney.com]
Sent: Thursday, January 24, 2008 6:39 PM
To: George, Robert W.
Cc: Jorgensen, Jay T.; Burns, Bryan; Mark_Quayle@cargill.com; James Graves; jgriffin@lathropgage.com; sjantzen@ryanwhaley.com; Gary Weeks; rredemann@pmrlaw.net; vbronson@cwlaw.com; bfreeman@cwlaw.com; dehrich@faegre.com; jelrod@cwlaw.com; rfunk@cwlaw.com; thill@rhodesokla.com; Jones, Tim; Hopson, Mark D.; Bond, Michael R.; rsanders@youngwilliams.com; Terry@thewestlawfirm.com; Webster, Timothy K.; jtucker@rhodesokla.com; pbuchwald@ryanwhaley.com; vmorgan@cwlaw.com; vrobinson@cwlaw.com; lphillips@cwlaw.com; Sperrazza, Quynh C.; lwhite@rhodesokla.com; gbarber@rhodesokla.com; Lawrence Zeringue; pthompson@bassettlawfirm.com; Dolan, Christopher H.; lrockwood@faegre.com; Jones, Bruce; Scott McDaniel; Nicole Longwell; Jinger Waller; kcarney@faegre.com; jwisley@cwlaw.com; kkobbeman@cwlaw.com; Craig A. Mirkes; Pilkington, Patrick; ljsoutherland@rhodesokla.com; Patrick Ryan; Melissa Keplinger; Louis Bullock; lward@motleyrice.com; Kelly Burch@oag.ok.gov; Baker, Fred; David Riggs; Daniel Lennington; trevor.hammons@oag.ok.gov; Bob Nance; Richard Garren
Subject: RE: Oklahoma v. Tyson Foods, Inc., et al. - Deposition of Roger Olsen

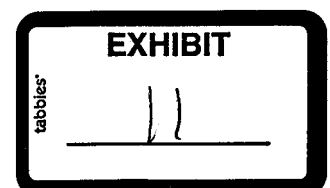
Robert,

Based on your request we agree to reschedule Dr. Olsen's deposition to Saturday, February 2nd. We can begin at 9am at the offices of Riggs, Abney. Needless to say, we do not agree with the characterization of the facts and circumstances you set forth in the email below. As I noted in our conversation this morning Dr Olsen, as well as our other experts, continue to prepare their opinions in this case for trial. To the extent that this preparation is relevant to the opinions given at the Preliminary Injunction Hearing, Mr. Olsen very well might rely upon this additional information. The materials produced earlier this week did not modify Dr. Olsen's opinions for the Preliminary Injunction Hearing.

Thanks, David.

David P. Page
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-----Original Message-----

From: George, Robert W. [mailto:Robert.George@KutakRock.com]
Sent: Thursday, January 24, 2008 11:45 AM
To: David Page
Cc: Jorgensen, Jay T.; Burns, Bryan; Mark_Quayle@cargill.com; James Graves; jgriffin@lathropgage.com; sjantzen@ryanwhaley.com; Gary Weeks; rredemann@pmrlaw.net; vbronson@cwlaw.com; bfreeman@cwlaw.com; dehrich@faegre.com; jelrod@cwlaw.com; rfunk@cwlaw.com; thill@rhodesokla.com; Jones, Tim; Hopson, Mark D.; Bond, Michael R.; rsanders@youngwilliams.com; Terry@thewestlawfirm.com; Webster, Timothy K.; jtucker@rhodesokla.com; pbuchwald@ryanwhaley.com; vmorgan@cwlaw.com; vrobinson@cwlaw.com; lphillips@cwlaw.com; Sperrazza, Quynh C.; lwhite@rhodesokla.com; gbarber@rhodesokla.com; Lawrence Zeringue; pthompson@bassetlawfirm.com; Dolan, Christopher H.; lrockwood@faegre.com; Jones, Bruce; Scott McDaniel; Nicole Longwell; Jinger Waller; kcarney@faegre.com; jwisley@cwlaw.com; kkobbeman@cwlaw.com; Craig A. Mirkes; Pilkington, Patrick; ljsoutherland@rhodesokla.com; Patrick Ryan; Melissa Keplinger
Subject: Oklahoma v. Tyson Foods, Inc., et al. - Deposition of Roger Olsen

David,

Thank you for your call this morning. I will call you shortly to follow up on this e mail, but wanted to get a written record of the situation and defendants' decision out there as soon as possible.

Defendants are striking the deposition of Roger Olsen scheduled for tomorrow, January 25, 2008 due to the untimely production of materials considered by Mr. Olsen. Plaintiffs were ordered to produce all materials considered by Dr. Olsen in connection with the opinions to be offered at the hearing on the preliminary injunction by no later than January 4, 2008 which was 21 days before his deposition scheduled for January 25, 2008. Dkt. No. 1425 (12/26/07 Order). Yesterday, while many of defendant's counsel were in Dr. Fisher's deposition, Plaintiffs delivered a CD of "additional materials" upon which Dr. Olsen is apparently now relying to support his opinions. Our initial review of the CD and our conversation with you this morning confirm that these materials are substantial in volume. Clearly, this production is untimely and Plaintiffs' emerging pattern of violations of the Court's orders regarding production of expert materials is severely prejudicing defendants' ability to work with its own experts and prepare an adequate defense to Plaintiffs' claim.

Defendants will likely seek emergency relief from the Court and request exclusion of the untimely produced materials and any opinions or analysis based upon those materials. Until that issue is ruled upon by

the Court, Defendants cannot proceed with the deposition of Mr. Olsen. You and I discussed alternative dates for a possible rescheduled deposition of Mr. Olsen. You indicated that he could be deposed on February 2nd. I explained that this date would prejudice Defendants ability to meet the February 8 deadline for our response brief which we intend to support with expert affidavits. As you know, Olsen is foundational to several of the experts on the Plaintiffs' side and thus his materials and the completion of his deposition impacts numerous experts on the defense side of the case. For the time being, please hold February 2nd for a possible deposition of Olsen. In addition, please advise as to whether February 1 would be an alternative date of availability. Please understand that our willingness to discuss possibly rescheduling the deposition of Olsen is in no way a waiver of or intended to prejudice our right to seek relief from the Court.

Please advise on the scheduling issues at your earliest convenience.

Robert W. George
robert.george@kutakrock.com

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